CONFORMAL HEAT SINK

ABSTRACT OF THE DISCLOSURE

In one embodiment, a heat sink of the invention includes a corrugated plate and a deformable membrane, attached to each other at the periphery to define an enclosed volume. The membrane has a metal foil layer, due to which it can be deformed to conform to a complicated surface geometry of the electronic module to be cooled. To mate the heat sink with the module, air pressure is applied to the enclosed volume through a fitting to force the membrane into close contact with heat generating components of the module. When the air supply is disconnected, the membrane retains its shape due to the malleability of the foil layer. The enclosed volume is then filled with an appropriate heat-conducting fluid, which may optionally be circulated to facilitate heat removal from the module.